

IN THE CLAIMS:

The following is a complete listing of the claims, and replaces all earlier listings and all earlier versions.

sub 0' \ 1. (Canceled)

2. (Previously Amended) The apparatus according to one of claims 6 or 7, wherein said comparison means includes computation means for computing degree of similarity between the scene-change frame and the image that has been designated by said designation means, and

wherein said scene extraction means extracts the scene corresponding to said image based upon results of computation performed by said computation means.

3. and 4. (Canceled)

5. (Previously Amended) The apparatus according to one of claims 6 or 7, wherein said designating means designates a pattern image that corresponds to any of a leading, intermediate or final frame of a scene that is the object of a search.

6. (Currently Amended) An image processing apparatus for processing a moving picture having screen-change information, comprising:

frame extraction means for extracting frames constituting an entered moving picture;

discrimination means for discriminating a scene change by comparing frames extracted by said frame extraction means;

storage means for storing scene-change information relating to the scene change discriminated by said discrimination means;

C¹ designating means for designating an image that corresponds to a scene that is the object of a search, wherein said designating means is capable of designating the number of scenes to be extracted;

comparison means for comparing a scene-change frame, which is obtained by referring to the scene-change information ~~that has been stored in said storage means;~~ and the image that has been designated by said designation means;

scene extraction means for extracting a scene from the number of scenes designated by designation means, that corresponds to the image based upon a result of the comparison performed by said comparison means; and

output means for editing scenes that have been extracted by said scene extraction means and combining these extracted scenes into a single moving picture[[,]]

~~wherein said designating means is capable of designating a number of scenes to be extracted.~~

7. (Currently Amended) An image processing apparatus for processing a moving picture having screen-change information, comprising:

~~frame extraction means for extracting frames constituting an entered moving picture;~~

~~discrimination means for discriminating a scene change by comparing frames extracted by said frame extraction means;~~

~~storage means for storing scene-change information relating to the scene change discriminated by said discrimination means;~~

~~designating means for designating an image that corresponds to a scene that is the object of a search, wherein said designating means is capable of designating time length of a scene to be extracted;~~

~~comparison means for comparing a scene-change frame, which is obtained by referring to the scene-change information ~~that has been stored in said storage means~~, and the image that has been designated by said designation means;~~

~~scene extraction means for extracting a scene from the time length of scenes designated by designation means, that corresponds to the image based upon a result of the comparison performed by said comparison means; and~~

~~output means for editing scenes that have been extracted by said scene extraction means and combining these extracted scenes into a single moving picture[[,]]~~

~~wherein said designating means is capable of designating the time of a scene to be extracted.~~

8. (Currently Amended) The apparatus according to claim 6, wherein said designating means is capable of designating the number of scenes to be extracted~~[[,]]~~ with regard to frames prior to and with regard to frames on and after a frame corresponding to the pattern image.

9. (Currently Amended) The apparatus according to claim 7, wherein said designating means is capable of designating the time of a scene to be extracted~~[[,]]~~ with regard to frames prior to and with regard to frames on and after a frame corresponding to the pattern image.

10. (Canceled)

11. (Previously Amended) The method according to one of claims 15 or 16, wherein said comparison step includes a computation step, of computing degree of similarity between the scene-change frame and the image that has been designated in said designation step , and

wherein said scene extraction step includes extracting the scene corresponding to the image based upon results of computation performed in said computation step.

12. and 13. (Canceled)

14. (Previously Amended) The method according to one of claims 15 or 16, wherein said designating step includes designating a pattern image that corresponds to any of a leading, intermediate or final frame of a scene that is the object of a search.

15. (Currently Amended) An image processing method for processing a moving picture having screen-change information, comprising:

~~a frame extraction step, of extracting frames constituting an entered moving picture;~~

~~a discrimination step, of discriminating a scene change by comparing frames extracted in said frame extraction step;~~

~~a storage step, of storing scene-change information relating to the scene change discriminated in said discrimination step;~~

~~a designating step, of designating an image that corresponds to a scene that is the object of a search, wherein said designating step includes optionally designating the number of scenes to be extracted;~~

~~a comparison step, of comparing a scene-change frame, which is obtained by referring to the scene change information that has been stored in said storage step; and the image that has been designated in said designation step;~~

~~a scene extraction step, of extracting a scene from the number of scenes designated in said designation step, that corresponds to the image based upon a result of the comparison performed in said comparison step; and~~

an output step, of editing scenes that have been extracted in said scene extraction step and combining these extracted scenes into a single moving picture[[,]]

~~wherein said designating step includes designating a number of scenes to be extracted.~~

16. (Currently Amended) An image processing method for processing a moving picture having screen-change information, comprising:

~~a frame extraction step, of extracting frames constituting an entered moving picture;~~

~~a discrimination step, of discriminating a scene change by comparing frames extracted in said frame extraction step;~~

~~a storage step, of storing scene-change information relating to the scene change discriminated in said discrimination step;~~

a designating step, of designating an image that corresponds to a scene that is the object of a search, wherein said designating step includes optionally designating time length of a scene to be extracted;

~~a comparison step, of comparing a scene-change frame, which is obtained by referring to the scene change information that has been stored in said storage step, and the image that has been designated in said designation step;~~

a scene extraction step, of extracting a scene from the number of scenes designated in said designation step, that corresponds to the image based upon a result of the comparison performed in said comparison step; and

an output step, of editing scenes that have been extracted in said scene extraction step and combining these extracted scenes into a single moving picture[[,]]

~~wherein said designating step includes designating the time of a scene to be extracted.~~

C' 17. (Currently Amended) The method according to claim 15, wherein said designating step includes designating [[a]] the number of scenes to be extracted[[,]] with regard to frames prior to and with regard to frames on and after a frame corresponding to the pattern image.

18. (Currently Amended) The method according to claim 16, wherein said designating step includes designating the time of a scene to be extracted[[,]] with regard to frames prior to and with regard to frames on and after a frame corresponding to the pattern image.

19. (Canceled)

20. (Currently Amended) A computer-readable memory storing program code of image processing for processing a moving picture having screen-change information, the memory including:

~~program code of a frame extraction step, of extracting frames constituting an entered moving picture;~~

~~program code of a discrimination step, of discriminating a scene change by comparing frames extracted in said frame extraction step;~~

~~program code of a storage step, of storing scene change information relating to the scene change discriminated in said discrimination step;~~

~~program code of a designating step, of designating an image that corresponds to a scene that is the object of a search, wherein said designating step includes optionally designating the number of scenes to be extracted;~~

~~program code of a comparison step, of comparing a scene-change frame, which is obtained by referring to the scene-change information ~~that has been stored in said storage step~~, and the image that has been designated in said designation step;~~

~~program code of a scene extraction step, of extracting a scene from the number of scenes designated in said designation step, that corresponds to the image based upon result of the comparison performed in said comparison step; and~~

~~program code of an output step, of editing scenes that have been extracted in said scene extraction step and combining these extracted scenes into a single moving picture[[,]]~~

~~wherein said designating step includes designating a number of scenes to be extracted.~~

21. (Currently Amended) A computer-readable memory storing program code of image processing for processing a moving picture having screen-change information, the memory including:

~~program code of a frame extraction step, of extracting frames
constituting an entered moving picture;~~

~~program code of a discrimination step, of discriminating a scene
change by comparing frames extracted in said frame extraction step;~~

~~program code of a storage step, of storing scene change information
relating to the scene change discriminated in said discrimination step;~~

C, ~~program code of a designating step, of designating an image that
corresponds to a scene that is the object of a search, wherein said designating step includes
optionally designating the number of scenes to be extracted;~~

~~program code of a comparison step, of comparing a scene-change
frame, which is obtained by referring to the scene-change information that has been stored
in said storage step, and the image that has been designated in said designation step;~~

~~program code of a scene extraction step, of extracting a scene from
the number of scenes designated in said designation step, that corresponds to the image
based upon result of the comparison performed in said comparison step; and~~

~~program code of an output step, of editing scenes that have been
extracted in said scene extraction step and combining these extracted scenes into a single
moving picture[[,]]~~

~~wherein said designating step includes designating the time of a
scene to be extracted.~~